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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,459	12/03/2003	Masaki Shiraishi	0229-0785P	4041

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EXAMINER	
PRETLOW, DEMETRIUS R	

ART UNIT	PAPER NUMBER
2863	

DATE MAILED: 11/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/725,459	SHIRAISHI, MASAKI	
	Examiner	Art Unit	
	Demetrius R. Pretlow	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-12,14-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-9,11,12,14 and 15* is/are rejected.

7)☒ Claim(s) *1-3,5 and 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 6-8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Although the claims are directed to a statutory category, merely reading would not appear to sufficient to constitute a useful, concrete and tangible result, since the outcome of the reading step has not been used in a disclosed practical application nor made available in such a manner that it's usefulness in a disclosed practical application can be realized. Note http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm

Claim Objections

Claims 1,6,7,8 are objected to because of the following informalities:

In claim 1, lines 7 applicant can not ascertain "**making a formula** of the physical parameter for the **force**" Force is a theory of physics and the formula is not made. The term "making" appears to establish a theory, which does not appear to be what applicant intended. It appears that applicant intended "deriving a formula" .

Claims 8 is objected because it appears to be the same claim as claim 7.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ono et al. (US 6,122,585). Ono et al. teach at least one sensor for measuring a physical parameter of the vehicle wheel during rolling, said at least one sensor being attached to the radius part; Note column 35, lines 56-59 and Figure 20. Ono et al. does not explicitly teach a memory in which a formula that calculates the physical parameter in terms of the force exerted on the vehicle wheel at least one predetermined measuring position is stored. However this would be inherent to the torque gradient estimating means (12). Note column 38, lines 50-57. Ono et al. teach a device for locating said at least one sensor in order to measure the physical parameter when the sensor is at the predetermined measuring position; Note column 56, lines 11-15. Note Figure 20. Ono et al. teach a processor which, using data on the physical parameter read from said at least one sensor, computes the formula to calculate the force and output data on the force. Note column 35, lines 50-53.

In reference to claim 10, Ono et al. teach at least one sensor is one sensor fixed to the radius part of the vehicle. Note column 35, lines 56-59 and Figure 20.

In reference to claim 15, Ono et al. teach to determine a breaking force during braking, a braking mechanism for the vehicle wheel; and a controller for controlling the

braking mechanism so that the breaking force becomes a maximum during braking (would be inherent to stopping the vehicle).

Note Figure 38

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Ono et al. in view of Kuchler et al. (US 5,894,094). Ono et al. teach the limitations above.

Ono et al. does not teach the force is at least one of a vertical force, lateral force and longitudinal force and a self aligning torque.

Kuchler et al. teach the force is a longitudinal force. Note 4 column 4, line 31.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Ono et al to include the teaching of Kuchler et al. because it would allow the determination of all forces occurring in the case of a load on a wheel being monitored. Note Kuchler et al. abstract lines 12-14.

In reference to claim 12, Ono et al. does not teach said at least one sensor is a plurality of sensors arranged around the rotational axis of the vehicle wheel and fixed to the radius part of the vehicle wheel. Note column 4, line 7 and Figure 1.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Ono et al to include the teaching of

Kuchler et al. because it would allow the determination of all forces occurring in the case of a load on a wheel being monitored. Note Kuchler et al. abstract lines 12-14.

Claims 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Sumiya et al. (US 6,263,728) in view of Ono et al. (US 6,122,585). Sumiya et al. teach obtaining data on a relationship between the force (static frictional force) exerted on the vehicle wheel and a physical parameter (pressure) of the vehicle wheel at at least one predetermined measuring position ("constant position" Note column 6, lines 4); (shown by the impact of pressure on the static frictional force) Note column 6, lines 50-54, and abstract lines 1-5. Sumiya et al. teach making a formula of the physical parameter for the magnitude of the force, using the obtained data on the relationship. Note column 6, lines 50-53. Sumiya et al. teach measuring the physical parameter (pressure) of the vehicle wheel during rolling. Note abstract lines 1-4. Sumiya et al. teach computing the formula using the measured physical parameter to calculate the force. Note column 6, lines 50-53.

Sumiya et al. does not teach the measuring of the physical parameter includes: locating a sensor for the physical parameter which is fixed to the radius part; and reading the sensor when the sensor is at said at least one predetermined measuring position.

Ono et al. teach the measuring of the physical parameter includes: locating a sensor for the physical parameter which is fixed to the radius part; and reading the sensor when the sensor is at said at least one predetermined measuring position. Note column 56, lines 11-15. Note Figure 20.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Sumiya et al. to include the teaching of Ono et al. because it would allow control of the braking force acting on the wheels. Note abstract, line 4-5.

Claim Objections

In reference to claims 1-3, and 5,the prior art of record does not teach step of the physical parameter is the magnitude of a radial strain in the radius part. It is this step found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record .

In reference to claims 7 and 8 the prior art of record does not teach the method steps of the measuring of the physical parameter includes: locating a plurality of sensors for the physical parameter which are fixed to the radius part; and reading each said sensor when the sensor is at least one of said at least one predetermined measuring position. It is these steps found in each of the claims, as it is **claimed in the combination**, that has not been found, taught or suggested by the prior art of record .

Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the

base claim and any intervening claims. The prior art of record does not teach the physical parameter is the magnitude of a radial strain in the radius part.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Demetrius R. Pretlow whose telephone number is (571) 272-2278. The examiner can normally be reached on Mon.-Fri. 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Demetrius R. Pretlow Demetrius Pretlow 11/9/06

Patent Examiner

MICHAEL NGHIEM
PRIMARY EXAMINER